

## DUAL SCHOTTKY DIODE BRIDGE

- MONOLITHIC ARRAY OF EIGHT SCHOTTKY DIODES
- HIGH EFFICIENCY
- 4A PEAK CURRENT
- LOW FORWARD VOLTAGE
- FAST RECOVERY TIME
- TWO SEPARATED DIODE BRIDGES

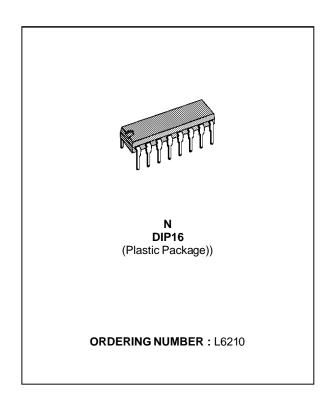
### **DESCRIPTION**

The L6210 is a monolithic IC containing eight Schottky diodes arranged as two separated diode bridges.

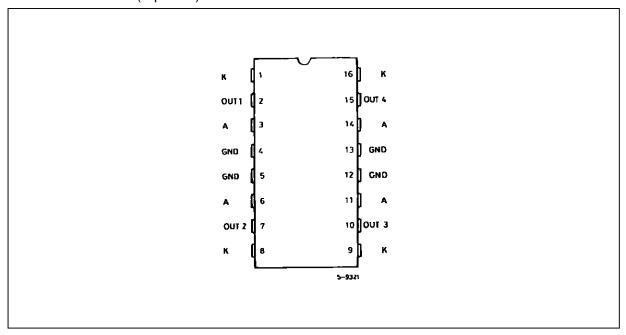
This diodes connection makes this device versatile in many applications.

They are used particular in bipolar stepper motor applications, where high efficient operation, due to low forward voltage drop and fast reverse recovery time, are required.

The L6210 is available in a 16 Pin Powerdip Package (12 + 2 + 2) designed for the 0 to 70xC ambient temperature range.

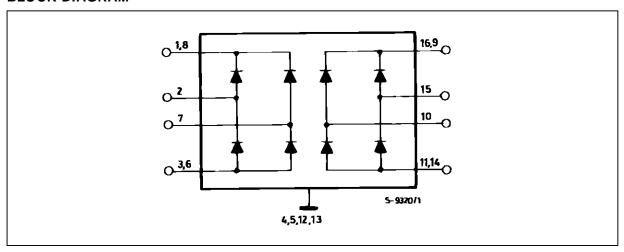


### PIN CONNECTION (top view)



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### **BLOCK DIAGRAM**



## **ABSOLUTE MAXIMUM RATINGS**

Symbol	/mbol Parameter		Unit
If	Repetitive Forward Current Peak	2	Α
Vr	Peak Reverse Voltage (per diode)	50	V
T <sub>amb</sub>	Operating Ambient Temperature	70	°C
T <sub>stg</sub>	Storage Temperature Range	-55 to +150	°C

## **THERMAL DATA**

Symbol	Parameter		Value	Unit
R <sub>th j-case</sub>	Thermal Impedance Junction-case	Max.	14	°C/W
R <sub>th j-amb</sub>	Thermal Impedance Junction-ambient without External Heatsink	Max.	65	°C/W

# **ELECTRICAL CHARACTERISTICS** ( $T_j = 25^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Unit
V <sub>f</sub>	Forward Voltage Drop	I <sub>f</sub> = 100 mA		0.65	0.8	
		i <sub>f</sub> = 500 mA		0.8	1	V
		I <sub>f</sub> = 1 A		1	1.2	
IL	Leakage Current	$V_R = 40 \text{ V}, T_{amb} = 25^{\circ}\text{C}$			1	mA

**Note:** At forward currents of greater than 1A, a parasitic current of approximately 10mA may be collected by adiacent diodes.



Figure 1: Reverse Current verus Voltage

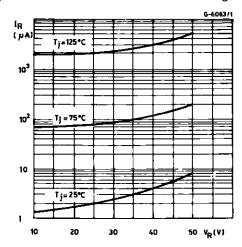
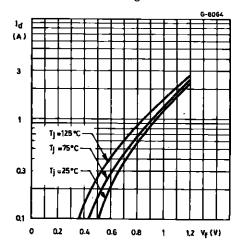


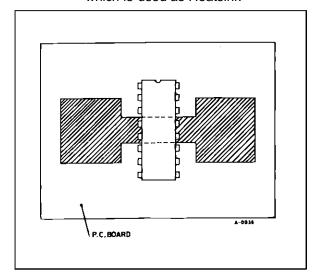
Figure 2: Forward Voltage versus Current



### **MOUNTING INSTRUCTIONS**

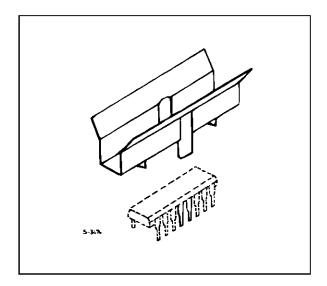
The Rth j-amb of the L6210 can be reduced by soldering the GND pins to suitable copper area of the printed circuit boards as shown in figure 3 or to an external heatsink (figure 4). During soldering the pin

Figure 3: Example of P.C. Board Copper Area which is used as Heatsink



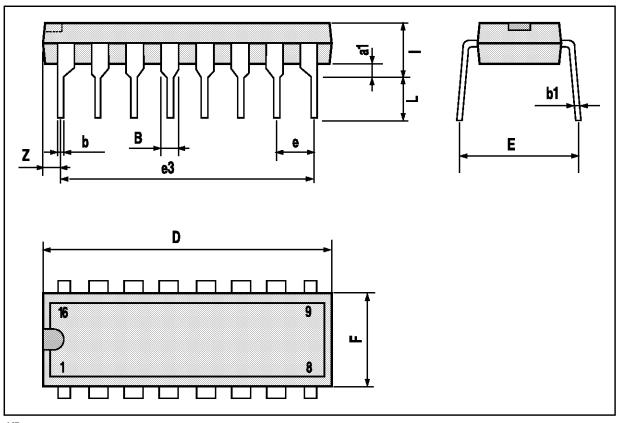
temperaturemust not exceed 260°C and the soldering time must not be longer then 12s. The external heatsink or printed circuit copper area must be connected to electrical ground.

Figure 4: Example of an External Heatsink



## POWERDIP16 PACKAGE MECHANICAL DATA

DIM.	mm			inch			
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
a1	0.51			0.020			
В	0.85		1.40	0.033		0.055	
b		0.50			0.020		
b1	0.38		0.50	0.015		0.020	
D			20.0			0.787	
E		8.80			0.346		
е		2.54			0.100		
e3		17.78			0.700		
F			7.10			0.280	
I			5.10			0.201	
L		3.30			0.130		
Z			1.27			0.050	



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